



Ageing and mobility in car-dependent societies: gender differences and shifts in mode

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Older male and female drivers in car-dependent settings: how much do they use other modes, and do they compensate for reduced driving to maintain mobility?

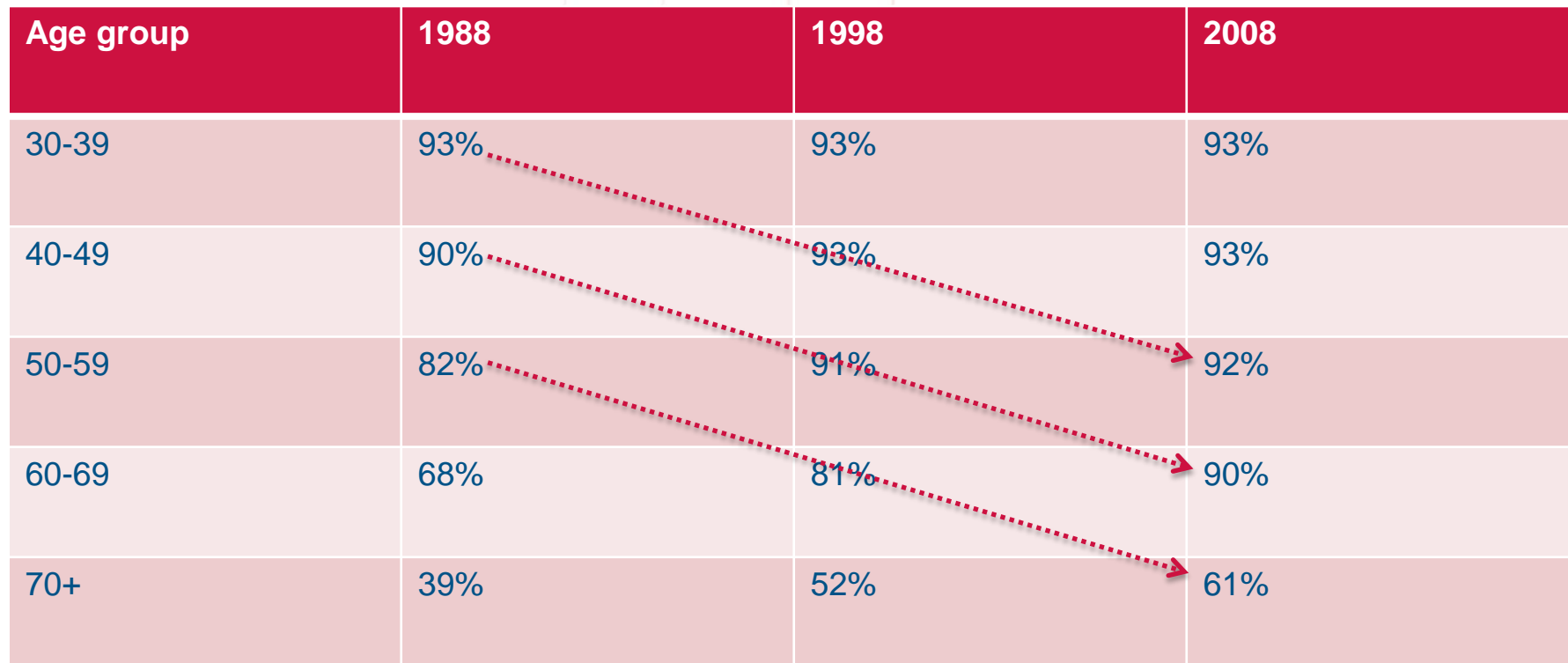
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The context

- Australia's population is ageing
- Mobility (physical movement across the transport system) linked to health, QoL
- Brisbane and Queensland car-dependent
- 90% of 25-60 y.o. licensed
- Cohort licensing effect

We are more likely to be licensed

Age group	1988	1998	2008
30-39	93%	93%	93%
40-49	90%	93%	93%
50-59	82%	91%	92%
60-69	68%	81%	90%
70+	39%	52%	61%



Source: Based on data from King et al. 2007

To drive or not to drive?

- Physical/cognitive impairment inevitable, but need to drive for as long as possible:
 - Some keep driving when they shouldn't
 - Some give up when they are still safe
 - Some compensate – but across modes?
- Transition to non-driving researched; little research into balance between modes

Ageing, gender and modes

- In couples among those over 60:
 - Male usually drives, but older, dies earlier
 - Females initially at risk as passengers, pedestrians, become single drivers later or not? And do they want to drive alone?
- In Queensland – walkability not ideal, driving a valued part of mobility with age

Research questions

- Do changes in use of travel modes by licensed drivers vary by age?
- Do these changes also differ by gender?
- Are compensations made for reductions in one mode by increasing another?
- Do actual and preferred travel modes coincide?
- What are the implications?

Method

- Independent Survey Panel in Road Safety:
 - 600 panel members aged >60, phone survey
 - 295 participated (182F, 113M)
 - Age categories:
 - 61-65 (101 – 66F, 35M)
 - 66-70 (106 – 65F, 41M)
 - 71+ (88 – 51F, 37M)

Survey questionnaire

- Hours/week as driver, passenger, pedestrian
- Days/week driven on average
- Proportion of time driving alone
- Preferred mode of vehicle travel:
 - Drive self
 - Be driven
 - Public transport/taxi

Decline in driving not
compensated by
increases in other modes

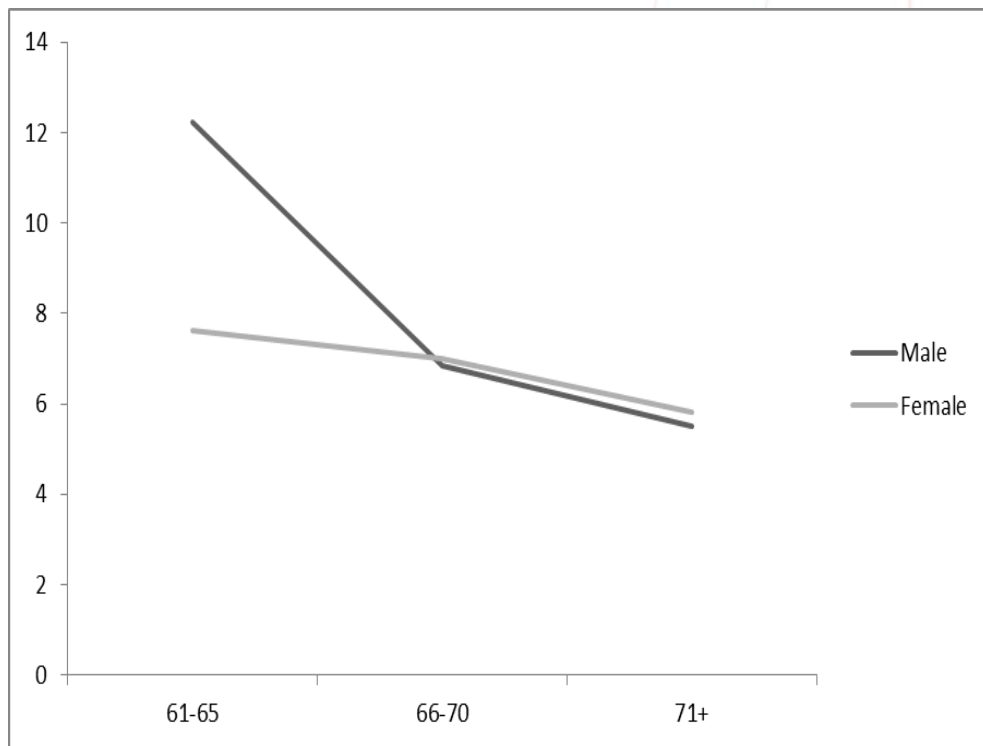
Table 1. *Self-reported exposure (weekly), by mode and participant age.*

Exposure by mode	Total	Age (years)		
		61-65	66-70	71+
	N = 295	N = 101	N = 106	N = 88
Driving days [<i>M (SD)</i>]	4.41 (.81)	4.48 (.76)	4.47 (.81)	4.26 (0.86)
Driving hours [<i>M (SD)</i>]	6.88 (5.91)	9.21 (11.47)	6.94 (5.30)	5.68 (4.08) **
Passenger hours [<i>M (SD)</i>]	1.71 (3.74)	1.67 (4.29)	1.83 (5.08)	1.61 (2.98)
Walking hours [<i>M (SD)</i>]	2.38 (3.39)	2.89 (4.29)	2.28 (2.86)	1.91 (2.71)

Note: *Significant differences evaluated at the level of .05 have been highlighted in bold for ease of reference.*

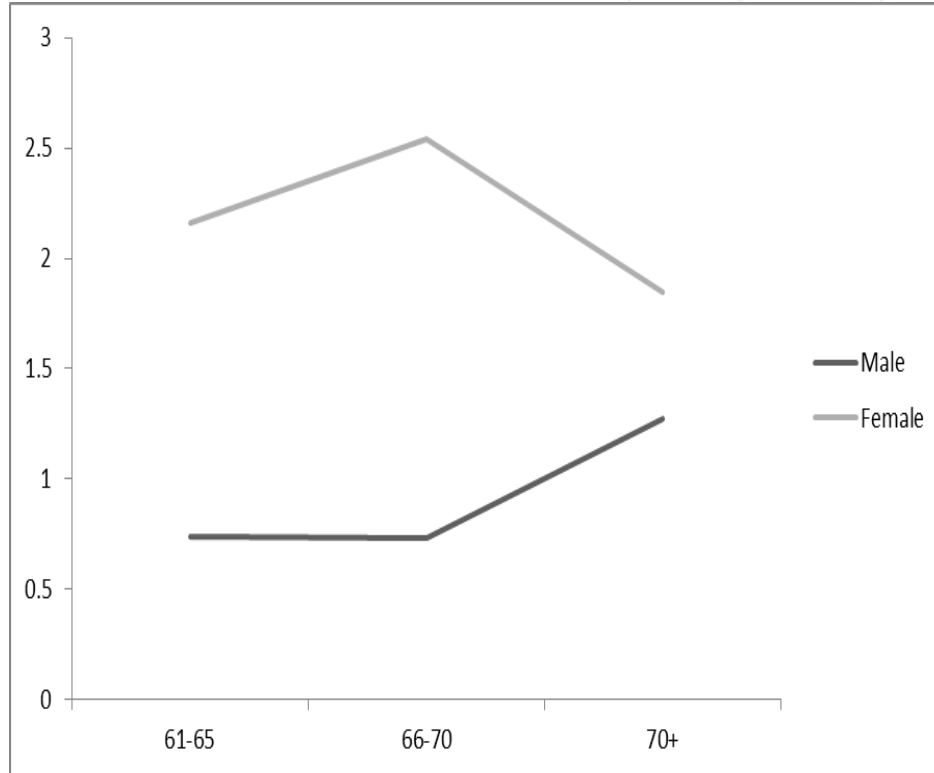
*Analyses compared means of the Likert scores via analysis of variance. * $p < .05$, ** $p < .01$, *** $p < .001$.*

Hours driven each week by age group and gender



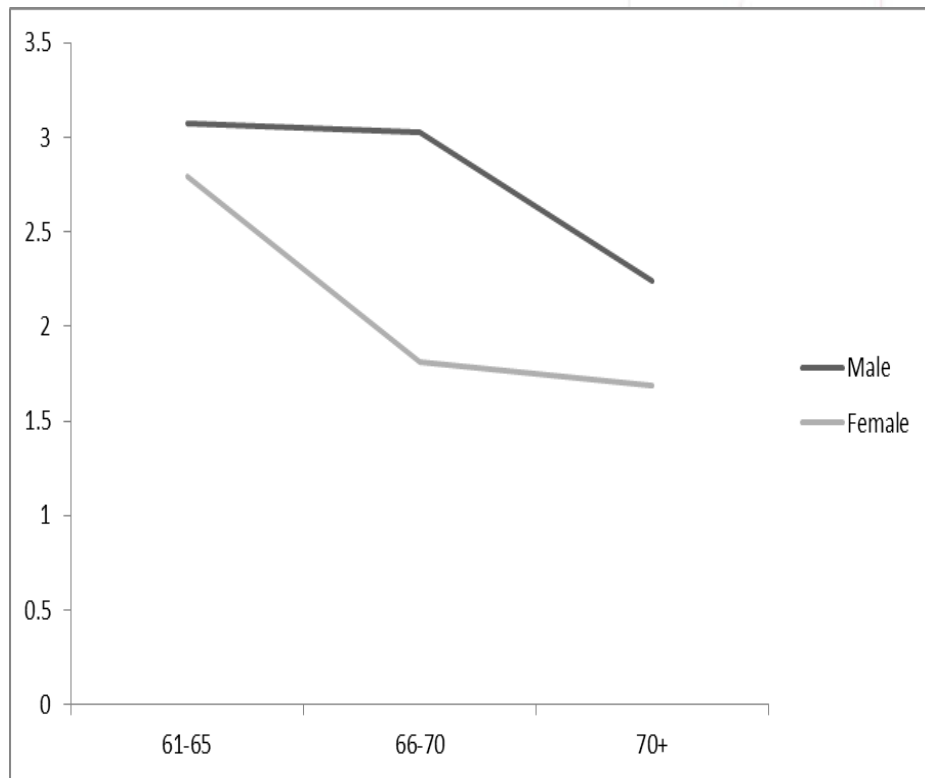
- Distinct decline in male driving time
- Overall decline in driving time with age is accounted for mainly by males
- No increase in female driving time

Hours as a passenger each week by age group and gender



- Males increase passenger time after 70
- Females decrease after 70

Hours walked each week by age group and gender



- Much lower than driving time
- Declines with age, sooner for women than men

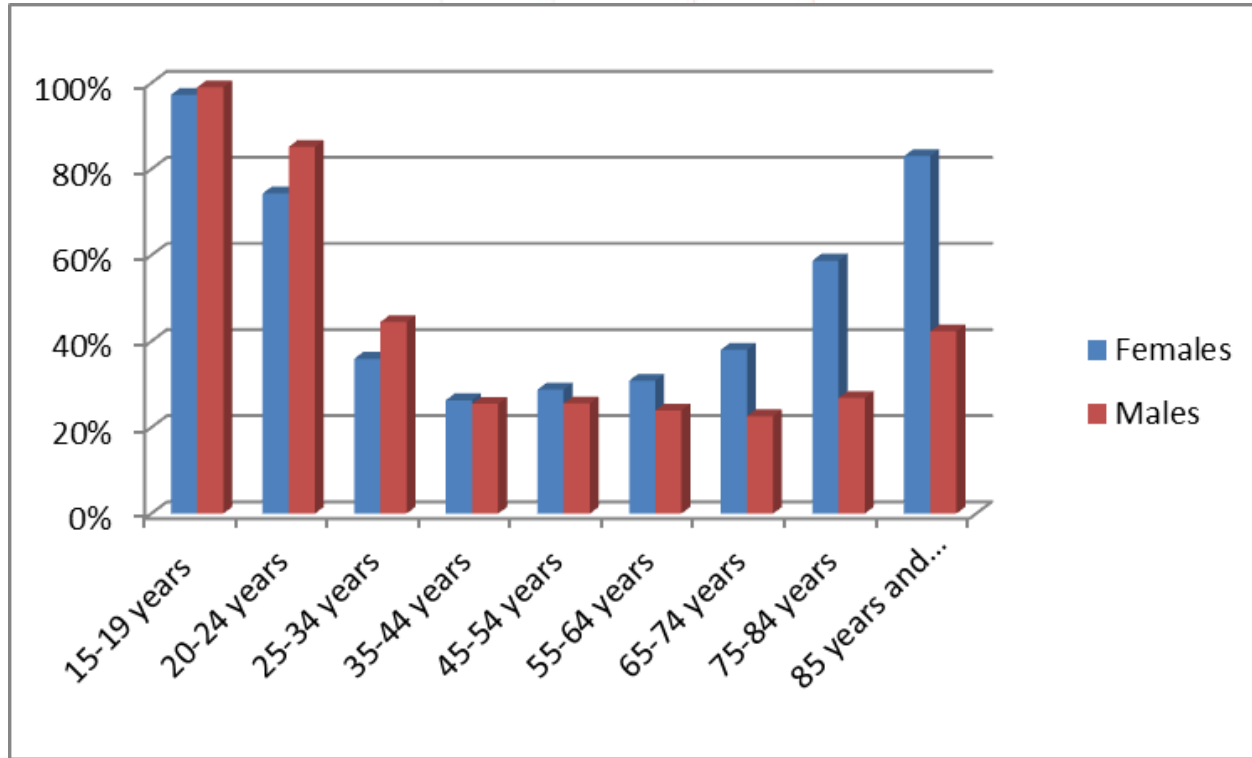
Preferences

- 70-80% prefer to drive themselves:
 - Higher for males
 - But proportion of males preferring to be passengers increases with age (11% to 19%)
- Low preference for public transport (4-5%)

Driving alone

- Less frequent for males aged 71+ (54%)
- Higher for females in all age groups, highest for age 71+ (87%)
- So: around 30% of females prefer to be driven by someone else, but 87% of their driving is by themselves – reflects marriage and death patterns by age

Percentage of people not married by age group, Australian Census 2011



Results

- In-vehicle mobility declines with age and is not compensated by other modes
- Levels of walking are low and decline
- Mobility depends on driving
- Many older females driving alone would prefer not to drive alone

Implications

- Expect drivers to remain licensed into 80s
- Mobility dominated by travel as a driver
- Need to keep them driving safely for longer
- Alternatives:
 - Focus on psychological impact of non-driving
 - Explore “mobility of the self” – virtual mobility

Thank you!

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Save the Date!



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